



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,386	11/26/2003	Stephen E. Savas	MAT-6	8034
21833	7590	03/07/2006	EXAMINER	
PRITZKAU PATENT GROUP, LLC 993 GAPTER ROAD BOULDER, CO 80303			ARANCIBIA, MAUREEN GRAMAGLIA	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,386

Applicant(s)

SAVAS ET AL.

Examiner

Maureen G. Arancibia

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20, 24-26 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) 15-17, 19, 20, 24-26, 31 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-14, 18, 30 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the invention of Group II, Species A in the reply filed on 29 December 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. The Examiner notes the cancellation of non-elected apparatus claims 1-11, 21-23, and 27-29. Applicant has identified Claims 12-14, and 18, as well as new claims 30 and 32, as being readable on elected Species A. Claims 15-17, 19, 20, 24-26, 31, and 33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 29 December 2005.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 12-14, 18, 30 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,699,689 to Bersin.**

In regards to Claims 12, 30, and 32, Bersin teaches, in an apparatus for removal of process related materials 38 from a substrate 36, a method comprising: defining a processing chamber 12; providing means for exhausting gases from the processing

Art Unit: 1763

chamber (*pump 15*; Column 4, Lines 20-22); arranging a structure (*pins 44*; Figure 1) in the processing chamber for supporting the substrate 36; locating a source 34 of reactive gas phase radicals 33 outside of said processing chamber (Figure 1; Column 5, Line 38 - Column 6, Line 32); conveying said reactive gas phase radicals along conduit 58 from said source to said processing chamber for communication with the substrate 36 (Figure 1; Column 6, Lines 24-46); and exposing both the surface of the substrate and the reactive gas phase radicals to an ultraviolet radiation 60 such that the ultraviolet radiation activates reactions between the gas phase radicals 33 and the process related materials 38 for use in removal of the process related materials. (Figures 1 and 2; Column 6, Line 47 - Column 7, Line 55)

In regards to Claim 13, Bersin teaches that the process related materials include residues remaining on the substrate (the remainder of a photoresist layer 38) following partial removal of the photoresist layer 38, and exposing includes removing the residues. (ex. Column 7, Lines 4-12) In other words, Bersin's teaching that the entire photoresist layer 38 is removed meets the limitations broadly recited in the claim, since when partial removal of the photoresist layer has been performed, the remainder of the photoresist layer (residue remaining on the substrate) is then removed.

In regards to Claim 14, Bersin teaches that the ultraviolet radiation is produced with a wavelength of 100 to 300 nanometers (1000 to 3000 Angstroms; Column 6, Lines 51-53), which overlaps with the claimed range of greater than 250 nanometers.

In regards to Claim 18, Bersin teaches using a plasma 43 to generate the reactive gas phase radicals without exposing the substrate to the plasma. (the

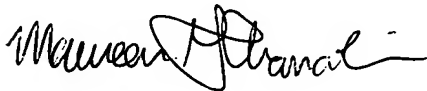
substrate is exposed only to plasma effluent having substantially no ions or electrons present; Column 5, Line 38 - Column 6, Line 32)

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maureen G. Arancibia
Patent Examiner
Art Unit 1763



Parviz Hassanzadeh
Supervisory Patent Examiner
Art Unit 1763